

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 11-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 11-20 of co-pending application No. 10/581238. Although the conflicting claims are not identical, they are not patentably distinct from each other because the co-pending application claims anticipate the claims of the instant application..

3. Claims 11-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 9-15 of co-pending application No. 10/562105. Although the conflicting claims are not identical, they are not patentably distinct from each other the co-pending application claims anticipate the claims of the instant application.

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4. Claims 11-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 10-18 of co-pending application No. 10/564230. Although the conflicting claims are not identical, they are not patentably distinct from each other because the co-pending application claims anticipate the claims of the instant application.

This is a provisional obviousness-type double patenting rejection.

Specification

5. The specification is objected to because it refers to “claim 1”. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term “directly dry items retaining in the washing container” is not understood. The applicant’s Fig. 1 illustrates the sorber dehumidifying air in a circulation duct.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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9. Claims 11-12 and 14-19 are rejected under 35 U.S.C. 102(b) as anticipated by Tarplee et al. (EPO Patent Application Publication No. EP0777998A1).

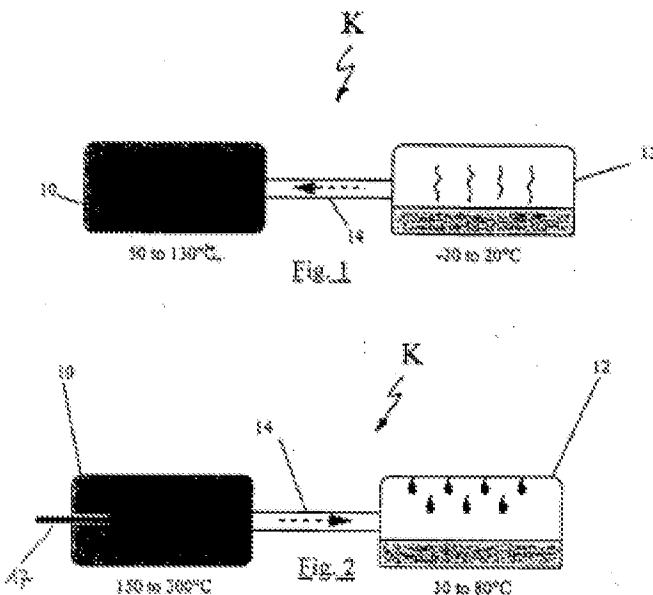
10. Tarplee et al. teaches a domestic appliance (dishwasher is *intended use*) having a container (D) (*washing is intended use*). There is a device for washing items retained in the washing container (D) using rinsing liquid. A medium-retaining container (water reservoir 12) for retaining a medium is taught. The medium (water) is a vaporisable medium or a sublimable medium. The medium *can be subjected* to at least one of an evaporation step and sublimation step; whereby the medium is cooled. A sorber (absorber/desorber 10) is taught in the form of a reversibly dehydratable material (pg. 2, Lines 26-38). The sorber and the medium-retaining container are communicated with one another (via control conduit 14) such that gas exchange *can take* place therebetween, see Figs. 1-2 (inserted into text, below). The reversibly dehydratable material acting to absorb vapor that has flowed from the medium-retaining container acting to absorb vapor that has flowed from the medium-retaining container into the sorber. The reversibly dehydratable material transforms from a dehydrated state into a hydrated state. The reversibly dehydratable material is restorable from a hydrated state into a dehydrated state by the application of thermal energy to the reversibly dehydratable material (via heater 17), Fig. 2. The sorber is operable to “*directly dry*” items retained in the washing container. The sorber is capable of providing the thermal energy for desorbing the sorber such that at least one of the rinsing liquor and the items located in the washing container are heated. The gas exchange pipe has a valve for selectively permitting the flow of vapor through the exchange pipe (pg. 3, Lines 8-10). An electric heating element (17) is located “in” the sorber for desorption of the reversibly of the dehydratable material. When the electric heating element is switched off and

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the valve is opened the medium can be vaporized or sublimed in the medium-retaining container and the medium-retaining container with medium can be cooled by the latent heat of evaporation. The medium vapor is passed via the exchange pipe to the sorber and the medium vapor is absorbed by the reversibly dehydratable material in the sorber whereby the sorber is heated with reversibly dehydratable material. When the electric heating element is switched on for desorbing the sorber, the sorber is heated and, when the valve is opened, the medium bound in the sorber is evaporated. The medium vapor released in the sorber is passed to the medium-retaining container by means of an exchange pipe and the medium vapor is condensed in the medium-retaining container whereby the medium-retaining container with medium is heated as a result of the latent heat of evaporation. The medium-retaining container is communicated via an outlet with the container. The sorber is communicated with the container via an inlet. The medium-retaining container and the sorber are communicated with one another by an air guiding pipe such that the air can be guided from the washing container to the medium-retaining container. The air is cooled upon contact with the cooled medium in the medium-containing container. The cooled air is subsequently guided into contact with the reversibly dehydratable material in the sorber. The air is heated by the sorber and *can be* guided back into the washing container during a drying step. The air at the medium-retaining container is cooled and the moisture contained in the air is condensed and the air at the sorber is heated to increase the moisture capacity of the air. The medium-retaining container is communicated via an outlet with the washing container. The sorber is communicated with washing container via an inlet. The medium-retaining container and the sorber are communicated with one another by an air guiding pipe such that the air can be guided from the washing container to the medium-retaining

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container whereupon the air is cooled upon contacted with the cooled medium in the medium-retaining container. The cooled air is subsequently guided into contact with the reversibly dehydratably material in the sorber. The air is heated and the heated air *can be* guided back into the washing container through the inlet. The medium-retaining container and the sorber are arranged in the direction of flow of the air from the washing container to allow heat exchange between the flowing air and the medium-retaining container and the reversibly dehydratable material in the sorber, Fig. 4. Note: the applicant is encouraged to recite positive limitations in the claims instead of “can be” which is an optional limitation.



Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hesse (German Patent Publication No. DE3741652) in view of Tarplee et al. (EPO Patent Application Publication No. EP0777998A1).

14. Hesse teaches a dishwashing machine having a washing container (1). There is a device for washing items in the washing container using rinsing liquid, Fig. 1. The dishwashing machine is a closed-loop type in which drying is achieved by circulating air through a duct in which the air is first condensed by cooling then the fan (10) blows the air and then the dehumidified air is heated by a heater (13). The air loop has an inlet (7) leading to a desiccant-type condenser (11) which cools the air. The high-temperature, reduced moisture, air is returned to the washing chamber (2) by an inlet (8). Also, condensed water may return to the washing chamber via inlet (8).

15. Hesse does not teach the use of a desiccant sorber and a liquid to create a heat-pump in the cooling/heating duct of the air loop; however, Tarplee et al. teaches a domestic appliance (dishwasher is *intended use*) having a container (D) (*washing is intended use*). There is a device for washing items retained in the washing container (D) using rinsing liquid. A medium-retaining container (water reservoir 12) for retaining a medium is taught. The medium (water) is

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a vaporisable medium or a sublimable medium. The medium *can be subjected* to at least one of an evaporation step and sublimation step; whereby the medium is cooled. A sorber (absorber/desorber 10) is taught in the form of a reversibly dehydratable material (pg. 2, Lines 26-38). The sorber and the medium-retaining container are communicated with one another (via control conduit 14) such that gas exchange *can take* place therebetween, see Figs. 1-2 (inserted into text, above). The reversibly dehydratable material acting to absorb vapor that has flowed from the medium-retaining container acting to absorb vapor that has flowed from the medium-retaining container into the sorber. The reversibly dehydratable material transforms from a dehydrated state into a hydrated state. The reversibly dehydratable material is restorable from a hydrated state into a dehydrated state by the application of thermal energy to the reversibly dehydratable material (via heater 17), Fig. 2. The sorber is operable to “*directly dry*” items retained in the washing container. The sorber is capable of providing the thermal energy for desorbing the sorber such that at least one of the rinsing liquor and the items located in the washing container are heated. The gas exchange pipe has a valve for selectively permitting the flow of vapor through the exchange pipe (pg. 3, Lines 8-10). An electric heating element (17) is located “in” the sorber for desorption of the reversibly of the dehydratable material. When the electric heating element is switched off and the valve is opened the medium can be vaporized or sublimed in the medium-retaining container and the medium-retaining container with medium can be cooled by the latent heat of evaporation. The medium vapor is passed via the exchange pipe to the sorber and the medium vapor is absorbed by the reversibly dehydratable material in the sorber whereby the sorber is heated with reversibly dehydratable material. When the electric heating element is switched on for desorbing the sorber, the sorber is heated and, when the valve

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is opened, the medium bound in the sorber is evaporated. The medium vapor released in the sorber is passed to the medium-retaining container by means of an exchange pipe and the medium vapor is condensed in the medium-retaining container whereby the medium-retaining container with medium is heated as a result of the latent heat of evaporation. The medium-retaining container is communicated via an outlet with the container. The sorber is communicated with the container via an inlet. The medium-retaining container and the sorber are communicated with one another by an air guiding pipe such that the air can be guided from the washing container to the medium-retaining container. The air is cooled upon contact with the cooled medium in the medium-containing container. The cooled air is subsequently guided into contact with the reversibly dehydratable material in the sorber. The air is heated by the sorber and *can be* guided back into the washing container during a drying step. The air at the medium-retaining container is cooled and the moisture contained in the air is condensed and the air at the sorber is heated to increase the moisture capacity of the air. The medium-retaining container is communicated via an outlet with the washing container. The sorber is communicated with washing container via an inlet. The medium-retaining container and the sorber are communicated with one another by an air guiding pipe such that the air can be guided from the washing container to the medium-retaining container whereupon the air is cooled upon contacted with the cooled medium in the medium-retaining container. The cooled air is subsequently guided into contact with the reversibly dehydratably material in the sorber. The air is heated and the heated air *can be* guided back into the washing container through the inlet. The medium-retaining container and the sorber are arranged in the direction of flow of the air from the washing container to allow heat exchange between the flowing air and the medium-retaining

container and the reversibly dehydratable material in the sorber, Fig. 4. It would have been obvious to one of ordinary skill in the art the time of the invention to modify Hesse with Tarplee et al. to create a dishwashing machine with a closed-loop drying system which saves energy to achieve the expected result (see Tarplee et al., pg. 2, Lines 23-25).

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hesse (German Patent Publication No. DE19622882A1) teaches a latent heat storage "heat pump", Fig. 1 in a dishwashing machine.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON P. RIGGLEMAN whose telephone number is (571)272-5935. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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